PCT/DK2003/000832

CLAIMS

- 1) A process for the production of a beer; comprising the steps of;
 - (a) forming a grist comprising grain;
 - (b) forming a mash comprising the grist from step (a);
 - (c) liquefying the mash in a step comprising jet-cooking;
 - (d) saccharifying the liquefied mash;
 - (e) optionally fermenting the mash with a yeast; wherein the step (e) can be performed during or after step (d).
- 2) The process of claim 1, wherein the grist comprising grain from which hull and/or germ have been removed
- 3) The process of claims 1 and 2, wherein the liquefaction step (c) comprises the following sub-steps;
 - (c₁) jet-cooking the mash at a temperature between 85-140°C;
 - (c₂) holding the mash at a temperature between 55-95°C; wherein step (c₁) and/or step (c₂) is carried out in the presence of an alpha-amylase.
- 4) The process of any of the proceeding claims, wherein the saccharification step (d) and/or the fermentation step (e) is carried out in the presence of at least one of the following enzymes; glucoamylase, maltogenic alpha-amylase, beta-amylase, cellulase, pentosanase and protease.
- 5) The process of any of the proceeding claims, wherein the saccharification step (d) and/or the fermentation step (e) are carried out in the presence of a yeast cell wall degrading enzyme.
- 6) The process of claim 5, wherein the yeast cell wall degrading enzyme is selected from the group comprising beta-1,3-glucanase, 1,6-beta-glucanase, laminarinase, chitinase,

WO 2004/050820 PCT/DK2003/000832

mannanases, alpha-1,3-glucanase and protease.

- 7) The process of claim 5-6, wherein the yeast cell wall degrading enzyme is a preparation derived from *Trichoderma harzianum*.
- 8) The process of any of claims 1-7, wherein the saccharification step (d) and/or the fermentation step (e) is carried out in the presence of an acetolactate decarboxylase.
- 9) The process of any of the proceeding claims, wherein at least 1%, or more preferably at least 5%, even more preferably at least 10%, or most preferably at least 25%, such as at least 50%, at least 75%, at least 90% or even 100% (w/w) of the grist is grain.
- 10) The process of any of the proceeding claims, wherein the grist comprises malted grain.
- 11) The process of any of the proceeding claims, wherein the grist comprises malted or unmalted barley.
- 12) The process of any of the proceeding claims, wherein the grist grain is dry milled.
- 13) The process of any of the proceeding claims, wherein hops are added to the mash prior to the jet cooking step (b1).
- 14) The process of any of claims 1-11, wherein hops are added to the mash prior to the fermentation step (e).
- 15) The process of any of claims 1-11, wherein hops are added to the mash after the fermentation step (e).
- 16) The process of any of claims 1-14, wherein the beer is ale, strong ale, bitter, stout, porter,

WO 2004/050820 PCT/DK2003/000832

lager, export beer, malt liquor, barley wine, happoushu, high-alcohol beer, low-alcohol beer, low-calorie beer or light beer.

- 17) A wort produced by the process of any of claims 1-15
- 18) A malt extract derived from a wort produced by the process of any of claims 1-15.
- 19) A beer produced by the process of any of claims 1-16.